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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,323	03/06/2002	Steven M. Zink	02SW049	9035

7590 05/21/2008
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EXAMINER

TRUONG, LAN DAI T

ART UNIT	PAPER NUMBER
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2152

MAIL DATE	DELIVERY MODE
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05/21/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/092,323	Applicant(s) ZINK ET AL.	
	Examiner LAN-DAI Thi TRUONG	Art Unit 2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01/25/2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9-19, 21, 22, 24-28 and 31-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-19, 21-22, 24-28, 31, 32, 33-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01/25/2008 has been entered.

2. This action is response to communications: application, filed on 03/06/2002; amendment filed 01/25/2008. Claims 1-7, 9-19, 21-22, 24-28, 31, 32, 33-39 are pending; claims 1, 21, 31, 33 are amended; claims 8, 20, 23, 29-30, 32 are canceled.

3. The applicant's arguments file on 01/25/2008 have fully considered but they are moot in view with new ground for rejections.

Claim rejections-35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 1 recites the limitation "the controller" in line 6. There is insufficient antecedent basis for this limitation in the claim. However for examining purpose, the office assumes "the controller" represents as "industrial controller". The appropriate correction is required.

5. Claim 1 recites the limitation "the subset of data items" in line 7. There is insufficient antecedent basis for this limitation in the claim. However for examining purpose, the office assumes "the subset of data items" represents as "aggregated subset of data items." The appropriate correction is required.

Claim rejections-35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-7, 9-12, 14-19, 21-22, 25, 31, 33-39 are rejected under 35 U.S.C 103(a) as being un-patentable over Muller et al. (U.S. 6,480,489) in view of Crater et al. (U.S. 6,201,996).

Regarding claim 1:

Muller discloses the invention substantially as claimed, including a system, which can be implemented in a computer hardware or software code, the method comprising:

the primary aggregation component aggregates one or more selected data items into an aggregated subset of data items: (in Muller's system, a multi-processor computer is used to

aggregate multiple packets into a datagram based on selected protocol types: column 8, lines 15-30; column 14, lines 35-40; column 35, lines 64-67; column 36, lines 60-67).

the communication component transmits the subset of data items via a singular communications packet across a network: (transmitting the datagram over network: Muller, column 8, lines 15-30; column 14, lines 35-40; column 35, lines 64-67; column 36, lines 60-67).

adding at least one secondary aggregation component based upon at least one of increased data demands and network protocol considerations: (Muller discloses that multiple packets are aggregated into a datagram, this process is implemented by a respective processor according protocol type. The numbers of processors in the multiprocessor computer and packets protocols are correlated together. It would have been obvious to one of ordinary skill in the art to know that if packets demands or network protocols are increased then numbers of processors should be increased: column 49, lines 51-62; column 50, lines 22-40; column 52, lines 14-29; column 17, lines 50-54; column 22, lines 50-60; column 23, lines 14-24).

a component receives handle information from the industrial controller related to the selected data items and employs the handle information as reference with consistent length to generate an update data packet to update data locations: (sending to the host a completion descriptor which includes empty buffer addresses indexes, pointers or references for identifying stored packets locations or storing packets locations in the buffer. The host then uses the provided completion description to allocate the buffer locations for store packets into those allocated buffer locations: Muller: column 5, lines 9-10; column 55, lines 25-67; column 56, lines 1-4).

However, Muller does not explicitly disclose an industrial controller; defining and installing the primary aggregation component at the industrial controller by an entity remote from the controller.

In Carter's industrial controller system, remote users can access and define control functions of the industrial controller by modifying control parameters or/ and procedure instructions those displayed through visual presentations or/ and templates in form of a webpage containing numbers of instructions and/or procedures: abstract; Fig. 2; column 3, lines 62-65; column 4, lines 6-8, 40-67; column 9, lines 20-67; column 10, lines 30-53; column 11, lines 58-60; column 12, lines 5-10).

Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Carter's ideas of provide remote user ability of access and influence control functions of the industrial controller into Muller's system in order to increase efficiencies and flexibility for industrial controlling network, see (column 3, lines 40-67).

Regarding claim 2:

In addition to rejection in claim 1, Muller-Crater further discloses client application that can selects and request subsets of data items from the controller: (Carter discloses the remote computer can retrieve, monitor, supervise, and modifies control parameters of action procedures/ of control structures: abstract; column 3, lines 58-67; column 4, lines 45-67; column 9, lines 60-67; column 10, lines 7-52; column 11, lines 28-67; column 12, lines 1-9; column 5, lines 52-67).

Regarding claim 3:

In addition to rejection in claim 2, Muller-Crater further discloses Human and Machine Interface: (Crater: column 19, line 27).

Regarding claim 4:

In addition to rejection in claim 2, Muller-Crater further discloses the communication driver adapted to communicate with a communication server associated with a client application: (Crater discloses network interface/ or machine interface adapted to communicate with server and remote computer: figure 2, items 215, 210; figure 3, item 300).

Regarding claim 11:

Muller-Crater discloses a method as discuss in claim 1, which further includes object including association classes: (Crater: column 11, lines 1-15).

Regarding claim 12:

This claim is rejected under rationale of claim 11.

Regarding claim 5:

Muller-Crater discloses a method as discuss in claim 1, which further includes sending request to the industrial controller relating to the subset of data items: (Carter: column 3, lines 58-67; column 4, lines 45-67; column 9, lines 60-67; column 10, lines 7-52; column 11, lines 28-67; column 12, lines 1-9; column 5, lines 52-67).

Regarding claims 6-7:

In addition to rejection in claim 5, Muller-Crater further discloses step of including tag and value information associated with tag in to response, the tag and value information relating to the subset of data items; employing the tag and value information to build the primary aggregation component from the response: (Muller: abstract).

Regarding claims 9 and 18-19:

In addition to rejection in claim 1, Muller-Crater further discloses removing the one or more secondary aggregation component: (Muller discloses that multiple packets are aggregated into a datagram, this process is implemented by a respective processor according protocol type. The numbers of processors in the multiprocessor computer and packets protocols are correlated together. It would have been obvious to one of ordinary skill in the art to know that if packets demands or network protocols are increased then numbers of processors should be increased; and vice versa, the processor should be removed when decreasing data demands for save memory purpose: column 49, lines 51-62; column 50, lines 22-40; column 52, lines 14-29; column 17, lines 50-54; column 22, lines 50-60; column 23, lines 14-24).

Regarding claim 10:

This claim is rejected under rationale of claim 9.

Regarding claim 14:

In addition to rejection in claim 11, , Muller-Crater further discloses services include at least one of Get All Attributes, Get All List, Set Attribute List, Reset, Start, Stop, Create Object and delete Object: (Muller: column 35, lines 45-50).

Regarding claims 15:

In addition to rejection in claim 11, Muller-Crater further discloses the data buffer including at least one of 1 to L data items, L being an interger, and includes at least one of the following types: single valued elements, bit, byte, 16 bits, 32 bits, greater than 32 bit configurations, unsigned integers, signed integers, floating point elements, single dimension array, multiple dimension array configurations, and user defined tag: (Muller: column 5, lines 9-10; column 55, lines 25-67; column 56, lines 1-4).

Regarding claim 16:

In addition to rejection in claim 15, Muller-Crater further discloses the single value elements include at least one of tag identifier and associated value: (tag information (e.g. predetermined protocol included in sending packet) is received at a transfer engine: Muller, abstract).

Regarding claim 17:

In addition to rejection in claim 15, Muller-Crater further discloses single dimension array include at least one of ID, value, and begin array element ID and a length: (It would have been obvious to one of ordinary skill in the art to know that those elements should be included in Muller' arrays: column 35, lines 45-50).

Regarding claim 33:

Muller discloses the invention substantially as claimed, including industrial controller, comprising:

the primary aggregation component aggregates one or more selected data items into an aggregated subset of data items: (in Muller's system, a multi-processor computer is used to aggregate multiple packets into a datagram based on selected protocol types: column 8, lines 15-30; column 14, lines 35-40; column 35, lines 64-67; column 36, lines 60-67).

the communication component associates with a remote entity and transmits the subset of data items via a singular communications packet across a network: (transmitting the datagram over network: Muller, column 8, lines 15-30; column 14, lines 35-40; column 35, lines 64-67; column 36, lines 60-67).

adding at least one secondary aggregation component based upon at least one of increased data demands and network protocol considerations: (Muller discloses that multiple packets are aggregated into a datagram, this process is implemented by a respective processor according protocol type. The numbers of processors in the multiprocessor computer and packets protocols are correlated together. It would have been obvious to one of ordinary skill in the art to know that if packets demands or network protocols are increased then numbers of processors should be increased: column 49, lines 51-62; column 50, lines 22-40; column 52, lines 14-29; column 17, lines 50-54; column 22, lines 50-60; column 23, lines 14-24).

a component receives handle information from the industrial controller related to the selected data items and employs the handle information as reference with consistent length to generate an update data packet to update data locations: (Muller discloses sending to the host a completion descriptor which includes empty buffer addresses indexes, pointers or references for identifying stored or storing packets locations in the buffer. The host then uses the provided completion description to allocate the buffer locations for store packets into those allocated buffer locations: column 5, lines 9-10; column 55, lines 25-67; column 56, lines 1-4).

However, Muller does not explicitly disclose a first component that processes information received from a remote entity.

In comparable art, Carter discloses remote users can access and influence control functions of the industrial controller by modifying control parameters or/ and procedure instructions those displayed through visual presentations or/ and templates in form of a webpage containing numbers of instructions and/or procedures: abstract; Fig. 2; column 3, lines 62-65;

Art Unit: 2146

column 4, lines 6-8, 40-67; column 9, lines 20-67; column 10, lines 30-53; column 11, lines 58-60; column 12, lines 5-10).

installing aggregating component at industrial controller by an entity remote from the industrial controller: (in Carter's system, the control functions of the industrial controller are accessed and influenced by remote users: abstract; Fig. 2; column 3, lines 62-65; column 4, lines 6-8, 40-67; column 9, lines 20-67; column 10, lines 30-53; column 11, lines 58-60; column 12, lines 5-10).

Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Carter's ideas of provide remote user ability of access and influence control functions of the industrial controller into Muller's system in order to increase efficiencies and flexibility for industrial controlling network, see (column 3, lines 40-67).

Regarding claim 21:

Muller discloses the invention substantially as claimed, including a method, which can be implemented in a computer hardware or software code, the method comprising:

requesting tag information: (tag information (e.g. predetermined protocol included in sending packet) is received at a transfer engine: abstract).

building an object from tag information: (predetermined protocol is used as packet's flow key identifier to associate with other packets in the same flow for reassembling them into reassemble data/ datagram: abstract).

installing the object: (transmitting the datagram over network: Muller, column 8, lines 15-30; column 14, lines 35-40; column 35, lines 64-67; column 36, lines 60-67; Muller: figure 18 C, item 1826).

updating object data: (Muller discloses sending to the host a completion descriptor which includes empty buffer addresses indexes, pointers or references for identifying stored or storing packets locations in the buffer. The host then uses the provided completion description to allocate the buffer locations for store packets into those allocated buffer locations: column 5, lines 9-10; column 55, lines 25-67; column 56, lines 1-4; figure 18 C, item 1828).

adding data items of interest to the object, the data items arranged according to at least one contiguous and non-contiguous address memory locations; receiving data from the object: (Muller discloses the host uses the provided completion description to allocate the buffer locations for store packets into those allocated buffer locations: column 5, lines 9-10; column 55, lines 25-67; column 56, lines 1-4; figure 18 C, item 1828).

receiving data handle information as reference with consistent length to generate an update data packet to update data locations: (Muller discloses sending to the host a completion descriptor which includes empty buffer addresses indexes, pointers or references for identifying stored or storing packets locations in the buffer. The host then uses the provided completion description to allocate the buffer locations for store packets into those allocated buffer locations: column 5, lines 9-10; column 55, lines 25-67; column 56, lines 1-4; figure 18 C, item 1828).

However, Muller does not explicitly disclose the industrial controller/ the controller.

In Carter's industrial controller system, remote users can access and influence control functions of the industrial controller by modifying control parameters or/ and procedure instructions those displayed through visual presentations or/ and templates in form of a webpage containing numbers of instructions and/or procedures: abstract; Fig. 2; column 3, lines 62-65;

column 4, lines 6-8, 40-67; column 9, lines 20-67; column 10, lines 30-53; column 11, lines 58-60; column 12, lines 5-10).

Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Carter's ideas of provide remote user ability of access and influence control functions of the industrial controller into Muller's system in order to increase efficiencies and flexibility for industrial controlling network, see (column 3, lines 40-67).

Regarding claim 22:

In addition to rejection in claim 21, Muller-Crater further discloses Internet connection: (Crater: column 4, lines 65-67; column 5).

Regarding claim 24:

In addition to rejection in claim 21, Muller-Crater further discloses updating Object via at least one of periodic occurrence, an event driven occurrence, and a request: (Crater discloses an authorization person request to modify control parameters: column 10, lines 34-53).

Regarding claim 39:

This claim is rejected under rationale of claim 33.

Regarding claim 34:

Muller-Crater discloses a method as discuss in claim 33, which further includes component is a processor adapted to process access to variable memory storing the one or more selected data items: (Muller: column 5, lines 9-10; column 55, lines 25-67; column 56, lines 1-4).

Regarding claim 35:

Muller-Crater discloses a method as discuss in claim 34, which further includes component to aggregate and transmit the subset of data items: (Muller: column 5, lines 9-10; column 55, lines 25-67; column 56, lines 1-4).

Regarding claim 36:

In addition to rejection in claim 35, Muller-Crater further discloses the network is at least one of an Ethernet, ControlNet, a DeviceNet, RS-232, RS-422, RS-485: (Crater's system implements for "industrial controlling" which shares functionality with either controlNet or DeviceNet as claimed: abstract).

Regarding claim 37:

In addition to rejection in claim 35, Muller-Crater further discloses the communication driver adapted to communicate with a communication server associated with a client application: (Crater discloses network interface/ or machine interface adapted to communicate with server and remote computer: figure 2, items 215, 210; figure 3, item 300).

Regarding claim 38:

In addition to rejection in claim 37, Muller-Crater further discloses HMI: (Crater: column 19, line 27).

Regarding claim 31:

Muller discloses the invention substantially as claimed, including a system, which can be implemented in a computer hardware or software code, the method comprising:

means for requesting tag identifiers: (tag information (e.g. predetermined protocol included in sending packet) is received at a transfer engine: abstract).

means for constructing an optimized data packet from the tag identifiers: (predetermined protocol is used as packet's flow key identifier to associate with other packets in the same flow for reassembling them into reassemble data/ datagram: abstract).

means for installing the optimized data packet: (transmitting the datagram over network: Muller, column 8, lines 15-30; column 14, lines 35-40; column 35, lines 64-67; column 36, lines 60-67; Muller: figure 18 C, item 1826).

means for refreshing the optimized data packet: (Muller discloses sending to the host a completion descriptor which includes empty buffer addresses indexes, pointers or references for identifying stored or storing packets locations in the buffer. The host then uses the provided completion description to allocate the buffer locations for store packets into those allocated buffer locations: column 5, lines 9-10; column 55, lines 25-67; column 56, lines 1-4; figure 18 C, item 1828).

means adding data items of interest to the data packet, the data items arranged according to at least one of contiguous and non-contiguous address memory locations; means for transmitting data from the optimized data packet: (Muller discloses the host uses the provided completion description to allocate the buffer locations for store packets into those allocated buffer locations: column 5, lines 9-10; column 55, lines 25-67; column 56, lines 1-4; figure 18 C, item 1828).

means for updating via employment of handle information as reference with consistent length: (Muller discloses sending to the host a completion descriptor which includes empty buffer addresses indexes, pointers or references for identifying stored or storing packets locations in the buffer. The host then uses the provided completion description to allocate the buffer

locations for store packets into those allocated buffer locations: column 5, lines 9-10; column 55, lines 25-67; column 56, lines 1-4; figure 18 C, item 1828).

However Muller does not explicitly disclose controller/ industrial controller.

In analogous art, such as, Carter's industrial controller system, remote users can access and influence control functions of the industrial controller by modifying control parameters or/ and procedure instructions those displayed through visual presentations or/ and templates in form of a webpage containing numbers of instructions and/or procedures: abstract; Fig. 2; column 3, lines 62-65; column 4, lines 6-8, 40-67; column 9, lines 20-67; column 10, lines 30-53; column 11, lines 58-60; column 12, lines 5-10).

Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Carter's ideas of provide remote user ability of access and influence control functions of the industrial controller into Muller's system in order to increase efficiencies and flexibility for industrial controlling network, see (column 3, lines 40-67).

Claims 13 are rejected under 35 U.S.C 103(a) as being un-patentable over Muller-Crater in view of Bhatt et al. (U.S. 6,097,399).

Regarding claim 13:

Muller-Crater discloses the invention substantially as disclosed in claim 11, but does not explicitly teach setting for at least one of object update times, event triggers, whether to update the object based on rate, demand and other criteria, wherein a data stream triggers are located, whether to continue on an over flow, number of driers currently installed, timestamp information, size of buffers, start times, and object lifetime settings.

In analogous art, Bhatt discloses aggregating data items to produce an aggregated data based on intervals: (column 5, lines 11-14; column 6, lines 1-17).

Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Bhatt's ideas of producing an aggregated data from received selecting data items with Muller-Crater's system in order to speed up transmitting time, see (Bhatt: column 4, lines 45-55).

Claims 25-26 are rejected under 35 U.S.C 103(a) as being un-patentable over Muller-Crater in view of Patel (U.S. 6,889,257)

Regarding claims 25-26:

Muller-Crater discloses the invention substantially as disclosed in claim 21, but does not explicitly teach method for removing object.

In analogous art, Patel discloses method for determining system conditions of the server in order to be able to modifying/adjusting packets aggregating process of transmitting the data packets to the client computer; it would have been obvious in the art to know that it needs at least one addition aggregation component based upon decreased data demands; vice versa; it would have been obvious in the art to know that Patel's aggregation system also can be able to remove the one or more secondary aggregation component based upon decreased data demands for save memory purpose; see (abstract; column 2, lines 35-67, 40-44; column 4, lines 34-67; column 5, lines 1-31).

Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Patel's ideas of aggregating packets into aggregated packet prior

transmitting them into a network with Muller-Crater's system in order to be able to reduce packets lost and bandwidth utilizing, see (Patel: column 8, lines 1-14).

Claims 27-28 are rejected under 35 U.S.C 103(a) as being un-patentable over Muller-Crater in view of McCoskey et al. (U.S. 2003/0028889).

Regarding claim 27:

Muller-Crater discloses the invention substantially as disclosed in claim 21, but does not explicitly teach placing data into scanning list.

In analogous art, McCoskey discloses method of placing suggestion data in a scan list, see ([0094]).

Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine McCoskey's ideas of placing suggestion data in a scan list with Muller-Crater's system in order to employ a well-know standard for saving resources and development time.

Regarding claim 28:

In addition to rejection in claim 27, Muller-Crater- McCoskey further discloses the list indicates which data items are to be updated: (Muller: column 5, lines 9-10; column 55, lines 25-67; column 56, lines 1-4; figure 18 C, item 1828).

The prior arts made of records and not relied upon are considered pertinent to applicant's disclosure. The following patents and publications are cited to further show the state of the art with respect to "System and methodology providing Optimized data exchange with industrial controller": 5805823; 5812996; 7231644; 6687805.

Conclusions

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan-Dai Thi Truong whose telephone number is 571-272-7959.

The examiner can normally be reached on Monday- Friday from 8:30am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob A. Jaroenchonwanit can be reached on 571-272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

05/19/2008.

/Jeffrey Pwu/
Supervisory Patent Examiner, Art Unit 2146